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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,392	02/27/2004	Masakazu Nakajo	Q79696	4820

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EXAMINER

SUNG, CHRISTINE

ART UNIT PAPER NUMBER

2884

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,392

Applicant(s)

NAKAJO, MASAKAZU

Examiner

Christine Sung

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2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-10 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10 and 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment filed on February 2, 2006 has been accepted and entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 7-8, 10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajo (US Pre Grant Publication 2001/0050975 A1).

Regarding claim 1, Nakajo discloses a radiation image forming unit (figures 1, 2 and 4) comprising:

a stimuable phosphor sheet (figure 2, elements 12, 28a, 28b, 28c and 28d) repeatedly usable for recording the radiation image information of a subject based on radiation applied thereto and erasing the recorded radiation image information (paragraphs [0004]-[0007]);

and a case (element 14) for storing said stimuable phosphor sheet (elements 12, 28a, 28b, 28c and 28d), wherein a sheet member (element 24) of a different material (Carbon layers) is attached to said stimuable phosphor sheet (see figure 2, when element 12, phosphor layer is placed over element 24).

Regarding claim 2, Nakajo discloses a radiation image forming unit as disclosed in claim 1, and further discloses that the stimuable phosphor sheet (elements 12, 28a, 28b, 28c and 28d) has a recess (area formed by elements 28a, 28b, 28c and 28d), said sheet member (element 24) of

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the different material being detachably mounted in said recess by a fastening member (element 32a).

Regarding claim 3, Nakajo discloses the image forming unit as disclosed in claim 2, and further discloses a stimuable phosphor sheet has a frame (elements 28a, 28b, 28c and 28d), said recess being defined in a surface of said frame (area enclosed by elements 28a, 28b, 28c and 28d), said stimuable phosphor sheet having a phosphor layer (element 12) detachably mounted in a recess defined in another surface of said frame (see figure 2, where element 12, phosphor layer, is placed over element 24 in the area enclosed by 28a, 28b, 28c and 28d).

Regarding claim 4, Nakajo discloses a radiation image forming unit (figures 1, 2 and 4) comprising:

a stimuable phosphor sheet (figure 2, elements 12, 28a, 28b, 28c and 28d) repeatedly usable for recording the radiation image information of a subject based on radiation applied thereto and erasing the recorded radiation image information (paragraphs [0004]-[0007]);

and a case (element 14) for storing said stimuable phosphor sheet (elements 12, 28a, 28b, 28c and 28d), wherein a sheet member (element 24) of a different material (Carbon layers) is removably attached (elements 32a fasten element 24 to the case) to a surface of said case which is exposed to radiation applied (radiation is incident on element 24, see paragraph [0050]) to said stimuable phosphor sheet that the case has a recess (area formed by elements 28a, 28b, 28c and 28d), said sheet member (element 24) of the different material being detachably mounted in said recess by a fastening member (element 32a).

Regarding claims 7 and 8, Nakajo discloses a radiation image forming unit (figures 1, 2 and 4) comprising:

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a stimuable phosphor sheet (figure 2, elements 12, 28a, 28b, 28c and 28d) repeatedly usable for recording the radiation image information of a subject based on radiation applied thereto and erasing the recorded radiation image information (paragraphs [0004]-[0007]);

and a case (element 14) for storing said stimuable phosphor sheet (elements 12, 28a, 28b, 28c and 28d), wherein a sheet member (element 24) of a different material (Carbon layers) is attached to said case, and wherein said case comprises:

a casing (element 14) for storing said stimuable phosphor sheet (element 12);

and a light shield plate (Figure 1, element 18) detachably mounted on said casing (element 14), a lid (element 16) being angularly movably (see figure 2, element 16 pivots) mounted on a portion of said light shield plate (see figure 2, element 18 and 16 are integrated);

said sheet member (element 14) of the different material being detachably mounted on an inner surface of said light shield plate (figure 1, element 14 is inside element 18).

Regarding claim 10, Nakajo disclose a radiation image forming cassette (figures 1, 2 and 4) for storing a stimuable phosphor sheet (element 12, 28a, 28b, 28c and 28d) repeatedly usable for recording the radiation image information of a subject based on radiation applied thereto and erasing the recorded radiation image information (paragraphs [0004]-[0007]),

said radiation image forming cassette (Figures 1, 2 and 4) having a sheet member (element 24) of a different material (carbon layers) from the radiation image forming cassette, said sheet member (element 24) being mounted on at least one surface of the radiation image forming cassette (see figure 2, when element 12, phosphor layer is placed over element 24);

wherein the sheet member (element 24) is removably attached to a surface of said cassette (figures 1, 2 and 4) which is exposed to radiation applied (radiation is incident on

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element 24, see paragraph [0050]) to said stimuable phosphor sheet. (Element 24 is detachable from the cassette)

Regarding claim 12, Nakajo disclose a radiation image forming cassette according to claim 10, wherein said surface of the radiation image forming cassette has a recess (area formed by elements 28a, 28b, 28c and 28d), said sheet member (element 24) of the different material being mounted in said recess (element 24 is mounted between elements 28a, 28b, 28c and 28d).

Regarding claim 13, Nakajo discloses a radiation image forming cassette according to claim 10, wherein said sheet member (element 24) of the different material is removably attached (via fasteners, element 32a) to the radiation image forming cassette.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajo (US Pre Grant Publication 2001/0050975 A1) in view of Boutet (US Patent 5,065,866 A).

Regarding claim 9, Nakajo discloses a radiation image forming unit (figures 1, 2 and 4) comprising:

a stimuable phosphor sheet (figure 2, elements 12, 28a, 28b, 28c and 28d) repeatedly usable for recording the radiation image information of a subject based on radiation applied thereto and erasing the recorded radiation image information (paragraphs [0004]-[0007]);

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and a case (element 14) for storing said stimuable phosphor sheet (elements 12, 28a, 28b, 28c and 28d), wherein a sheet member (element 24) of a different material (Carbon layers) is removably attached (elements 32a fasten element 24 to the case).

Nakajo further discloses a removable sheet member (elements 24) and a stimuable phosphor sheet (element 12). Further, although he discloses a configuration with a lid, he does not specify a tray configuration. However, such a configuration is known, as disclosed by Boudet (See figure 1). Boudet discloses a radiation detection device with a removable tray (element 26) that stores the stimuable phosphor (element 28), that is defined in a side of the case (element 10) and that the tray has a cap (element 30) for closing the opening (element 22). One of ordinary skill in the art at the time the invention was made would be motivated to use the tray configuration as disclosed by Boudet with the invention as disclosed by Nakajo in order to increase the accessibility of the phosphor and decrease the likelihood of damage to the phosphor during use.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajo (US Pre Grant Publication 2001/0050975 A1) in view of Sayed (US Patent 5,773,832 A).

Regarding claim 14, Nakajo disclose the limitation set forth in claim 10, but does not specify that said radiation image forming cassette has a thickness which is at most 1/2 of a standard value according to ISO 4090. First, it is obvious that the standard ISO 4090 is used, as such a standard by definition is the standard film dimension used for medical radiography, which is 14mm. Sayed discloses a cassette with a thickness of 8mm (Figure 7, element Th and column 6, lines 17-21), slightly over 1/2 the ISO 4090 value. One of ordinary skill in the art would be.

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motivated to have a cassette thickness less than 8 mm, as disclosed by Sayed as decreasing the thickness would increase portability of the imager.

5. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajo (US Pre Grant Publication 2001/0050975 A1) in view of Sayed (US Patent 5,773,832 A) further in view of Walker (US Patent 6,158,888A).

Regarding claims 15 and 16, Nakajo in view of Sayed discloses the limitation set forth in claim 14, but does not specify that the cassette comprises a pair of cassettes stacked together, protrusions are formed on a frame of one of said pair of cassettes, and recesses are formed on a frame of the other of said pair of cassettes, respectively, and said protrusions are fitted in said recesses such that said pair of cassettes are in alignment with each other. Further, regarding claim 16, Nakajo in view of Sayed does not specify that a marking is provided on a radiation image recording area of said cassette for adjusting a position of a radiation image recorded in said radiation image recording area.

Walker discloses a set of cassettes stacked together (see figure 12), that are aligned by using markings that are built into the cassette (see figure 11) and adjusting them until they match. Although, Walker does not specify using the recesses to align the cassettes, the markings provided on the cassettes perform the same function. One of ordinary skill in the art would be motivated to use stacked cassettes in order to increase the accuracy of the radiation detected by detecting in multiple dimensions and also to increase the accuracy by detecting radiation using different films/phosphors to detect different radiation energies.

Response to Arguments

6. Applicant's arguments filed February 2, 2006 have been fully considered but they are not persuasive.

7. Claims 1-3

Regarding these claims, applicant argues that the sheet member is not "attached" to the phosphor sheet. However, the term "attached" does not require that the elements are "expoxied" or "glued" but merely in contact with each other in a fashion where the cannot be taken apart. The elements are assembled and are in contact with each other and are held in place by the casing/frame.

8. Claims 4, 7-9

Regarding these claims, applicant argues that the sheet member of a different material is not removably attached to the surface of the casing. The examiner respectfully disagrees. The element (24) can be disassembled and removed from the casing (see figure 5).

a. Claims 10, 12-16

Regarding these claims, applicant argues that the sheet member of a different material is not removably attached to the surface of the casing. The examiner respectfully disagrees. The element (24) can be disassembled and removed from the casing (see figure 5).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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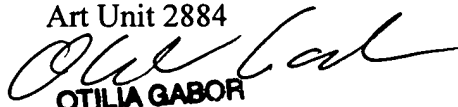
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 571-272-2448. The examiner can normally be reached on Monday- Friday 7-3 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christine Sung
Examiner
Art Unit 2884


OTILIA GABOR
PRIMARY EXAMINER

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